25X1

COUNTRY : Germany/USSR

SUBJECT : Production of Explosives

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25X1

This is UNEVALUATED Information

1. The Sprengstoff-A Zundschnur-Werke Grauschwitz, A.G. are making at the present time rock-blasting and safety mining explosives 25X1

2. Ammonium nitrate is the main ingredient used in the manufacture of these explosives. It is bought by the factory as a finished product, but must be ground and dried up to 0,005 % moisture before its use. This process takes place in a batting machine and in an air-heated drying drum. Likewise all other raw materials, needed for the manufacture of explosives, are supplied by other firms in a finished state. Soda nitre, sawdust, trinitroluene and collodion wool are dried separately; they are broken up into small pieces and are sifted or melted and then processed. The most important compound of the explosives is nitro glycerine which is made separately according to the precipitation process (Verdrangniaverfahren), i.e. nitration and separation take place in the same apparatus; after washing, the nitro glycerine is added to the explosive as a neutral element. All raw materials used are weighed in special containers in the processing plants and are then taken to the mixing department.

3. The different raw materials are mixed in the mixing plant. The finished explosive mixture is put once more through a sieve and the total weight of the charge is checked. The explosive is now poured into vats and taken to the settling plant where it remains until the time it is filled into cartridges. Checks and laboratory tests are made currently to make sure that the explosive matter is well mixed. There are separate filling houses where the powderlike explosive mixture is disposed by means of special filling machines; upon disengaging of a foot pedal, a certain quantity (always the same) of explosive mixture is dumped into a paper shell which is attached to the pipe, mounted on the filling spindle. The paper cartridge is then closed by hand. The finished shells are taken to the immersion room where they are put into a paraffin bath. The paraffin cover protects the explosive against moisture. Now the cartridges are taken to the packing room and packed into wooden boxes and cardboard boxes. The boxes are stored in magazines until shipment. Gelatine-like explosives are poured into shells in separate filling houses; for these explosives, paper shells are used which have already been immersed in paraffin. Here too, the explosive mixture is released in uniform quantities by rotating a filling spindle and pouring into the cartridge cases. The filling of the gelatine-like mixture requires more manual work than that of powder explosives.

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4. The shells are made either by special machine or by hand. A printing press is used for marking the paper; a machine is likewise available for the paraffining process. The cardboard used for boxes is supplied in fixed sizes; they are punched and folded in the packing house; the boxes required for the explosives are likewise being made in the packing department.

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